

**SYSTEM AND METHOD FOR DYNAMICALLY ALLOCATING SHARED
MEMORY WITHIN A MULTIPLE FUNCTION DEVICE**

ABSTRACT OF THE DISCLOSURE

5 An apparatus and method that provides dynamic buffer
allocation of shared memory within a multiple function integrated
circuit. This apparatus includes a processing module and shared
memory coupled to the processing module. Shared memory stores
operational instructions for the processing module based on the
mode of operation. The multiple function integrated circuit
10 identifies active modules operably coupled to the multiple
function integrated circuit that require buffered memory. The
circuit further determines the buffer requirements for the
identified active module(s) and allocates shared memory into
buffers for use by the active modules.

15